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A NEW PINECONE FISH, MONOCENTRIS REEDI, FROM CHILE, A NEW FAMILY RECORD FOR THE EASTERN PACIFIC

By Leonard P. Schultz

Dr. Edwyn P. Reed [1] recently sent to me for identification a photograph of, and later at my request the dried specimen of, a pinecone fish of the family Monocentridae taken off the coast of Chile in the Juan Fernández Islands at a depth of 200 to 250 meters. A photograph of the specimen was also sent to H. W. Fowler, who published a note entitled "The Pinecone Fish, *Monocentris japonicus* (Houttuyn) at Juan Fernandes, Southeast Pacific" (Fish Culturist, reference below).

This unique specimen represents the first record for the family in the eastern Pacific. Upon comparison of the specimen with the three other known species referred to the family, I observed that it differed in several characteristics and represented a new species.

The occurrence in the eastern American Pacific of another of the tropical central-western Pacific fauna indicates once more that the eastern Pacific fish fauna is more closely related to that of the Indo-Pacific than formerly supposed. These two faunas have differentiated mostly on the species level and less so at the generic level.

[1] Chief of the biological department, Dirección General de Pesca y Caza, Valparaiso, Chile.

***Monocentris reedi*, new species**

PLATE 1

Monocentris japonicus, Fowler, Fish Culturist (Philadelphia), vol. 34, No. 9, p. 65, fig., May 1955 (Juan Fernández Islands, Chile).

Monocentris, Reed, Inv. Zool. Chilenas, vol. 2, No. 8, p. 131, fig. 1955 (Juan Fernández Islands, Chile).

HOLOTYPE: USNM 164227. A dried specimen 92 mm. in standard length, taken in lobster traps in February 1955 off Más a Tierra Island, Juan Fernández Islands, off the coast of Chile, at depth of 200 to 250 meters by fishermen.

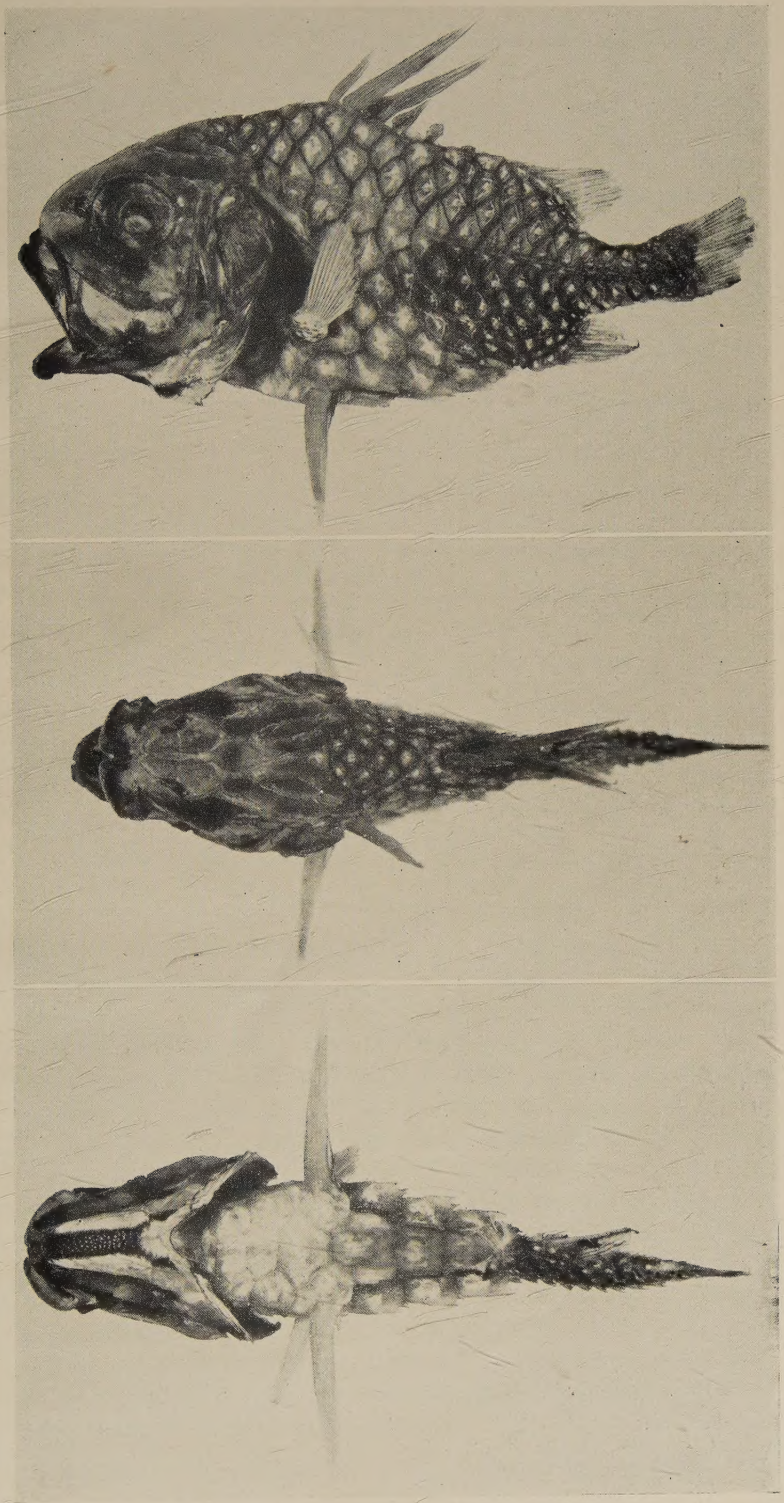
DESCRIPTION: The following counts were made: Dorsal rays VI,ii,10, with a rudiment of a seventh spine; anal i,10; pectoral ii;12–ii,12; pelvic I,iii; plates along lateral line from rear of head to base of caudal fin 18 on one side, 19 on the other; plates in a row from soft dorsal origin to lateral line 4, and from anal origin to lateral line (obliquely forward) 4. The details of arrangement of plates are illustrated in the photographs.

Certain measurements were made on the holotype, and these are expressed in thousandths of the standard length of 92 mm. as follows: Length of head 392; greatest depth 456; least depth of caudal peduncle 92; length of caudal peduncle from base of last anal ray to midbase of caudal fin 174; diameter of eye 130; length of snout 125; maxillaries or distance from tip of snout to rear of maxillary 201; bony interorbital space 120; length of first dorsal spine 102, of longest or second dorsal spine 267; length of pelvic spine 310.

See table 1 for counts made on *Monocentris japonicus* (Houttuyn) and *M. reedi*, new species.

DISCUSSION: The family Monocentridae has referred to it two genera—*Monocentris* Bloch and Schneider with *Gasterosteus japonicus* Houttuyn as genotype, from the western Pacific, and *Cleidopus* De Vis with *C. gloria-maris* De Vis as genotype, from Australia. The genus *Cleidopus* differs from *Monocentris* in having a patch of vomerine teeth, a luminous organ on each side of the mandible, a very narrow preorbital bone instead of no teeth on the vomer, no luminous organ on the mandible, and a broad preorbital bone.

Powell (Rec. Auckland Inst. Mus., vol. 2, p. 151, pl. 36, 1938, type locality Opoutama Beach, 40 miles south of Gisborne, New Zealand) described *Cleidopus neozelanicus*. He points out that this species is intermediate between *Monocentris* and *Cleidopus*. It agrees with *Monocentris* in having a broad preorbital and no luminous organs on mandible. It agrees with *Cleidopus* in having vomerine teeth. With this intermediate species, perhaps as Powell suggests, *Cleidopus* should be referred as a synonym to *Monocentris*. Anyway, regardless of the generic affinities which I cannot work out because of lack of material, *neozelanicus* differs from *reedi* in having vomerine teeth, a



Holotype of *Monocentris reedi*, new species.

deeper body, and greatest depth 1.6 for *neozelanicus* and 2.1 or 2.2 for *reedi*.

The genus *Monocentris* has had up to the present only one species referred to it, namely *M. japonicus* (Houttuyn). The following named species are synonyms of *japonicus: Sciaena japonica* (*cataphracta*) Thunberg and *Monocentris carinata* Bloch and Schneider.

TABLE 1.—*Counts recorded for species of* Monocentris

Species	Number of fin rays								
	Dorsal fin					Anal fin soft rays		All rays of pectoral fin	
	Spines			Soft rays					
	V	VI	VII	11	12	10	11	14	15
M. japonicus (Houttuyn)	1	7	3	10	1	9	2	13	8
M. reedi, new species		1			1		1	2	

Species	Number of gillrakers on first arch								Total number of gillrakers on first arch				
	Above angle		At angle	Below angle									
	7	8	1	12	13	14	15	16	20	21	22	23	24
M. japonicus Houttuyn)	6	4	10	6	3	1			5	2	2	1	
M. reedi, new species		2	2					2					2

Species	Number of plates along lateral line					
	14	15	16	17	18	19
M. japonicus (Houttuyn)	4	6				
M. reedi, new species					1	1

Monocentris japonicus differs from *M. reedi* in having a deeper body, 1.6 to 1.8 instead of 2.1 to 2.2; gillrakers 12 to 14 on lower part of first gill arch instead of 16; and 14 or 15 plates along lateral line instead of 18 or 19. In addition *M. reedi* appears to have a more slender caudal peduncle than *M. japonicus*. Because of the dried condition of the type and the tips of all soft fin rays having been broken off, it is not possible to compare with accuracy many possible measurements. When more specimens become available a more detailed study is needed, but this short description brings to the attention of ichthyologists a remarkable discovery in the eastern Pacific.

I take great pleasure in naming this rare species in honor of Dr. Edwyn P. Reed, who brought it to my attention and who deposited the holotype in the U. S. National Museum.

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deeper body, and greater depth 1.3 for *M. sadalmelikae* and 2.1 or 2.2 for *M. vadi*.

The genus *Monocentris* has had up to this present only one species referred to it, namely *M. japonica* (Houttuyn). The following material species are synonyms of *japonica*: *Scleroderma japonicum* (Houttuyn) Temminck and Schlegel; *M. sadalmelikae* Bolton.

TABLE I.—Counts recorded for species of *Monocentris*.

| Species | Number of the rays | | |